

## Undescribed plants from Guatemala. IV.

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(WITH PLATE XI.)

**Gonzalea thyrsoidea.**—Pilose: leaves except veins glabrate, oblong (8-9 inches), each end acuminate, shortly petioled: thyrsus virgate, a foot long; flowers 3-7, pedicellate, in scattered nearly sessile cymose clusters: calyx-tube produced; teeth smooth, colored, small, triangular, unequal: corolla-tube cylindrical, 7 lines long; lobes nearly half as long, of a darker red, farinaceous and arachnoid within, their contact in æstivation alternately imbricate and induplicate-valvate: anthers barely included: style scarcely attaining to their base; divisions of stigma 4, linear: disk radiately 8-lobuled: ovary 4-locular.—Mountains of Pansamalá, Dept. Alta Verapaz, alt. 3,800 feet, May, 1887. (Ex Plantis Guatemalensibus Tuerckheimianis, quas edidit John Donnell Smith, 1249.)

**Mikania pyramidata.**—High-climbing shrub with ferruginous-hirsute branches, petioles and inflorescence: leaves pubescent, more scabrid above, ovate-lanceolate, slenderly acuminate, 4-8 inches long, base truncate or rounded, margin with an angulate tooth and distant callose points, nerves from base in 2-3 remote pairs: panicles pyramidal, compound, densely flowered, 6-12 inches long; branches brachiate, leafy-bracted below, the upper alternate; heads loosely corymbose, pedicels equaling involucre; its bracts glabrate, linear-oblong (2 lines), apex obtusish and pubescent, subtending bract shorter and lanceolate or none: corolla equaling involucre; limb campanulate, exceeding slender tube, cleft to middle in ovate-lanceolate lobes: akenes nearly smooth, a little exceeded by involucre and sordid-white pappus.—Forest near Coban, Dept. Alta Verapaz, alt. 4,300 feet. January, 1887. (Ex Pl. cit. 1106.)

**Zexmenia Guatemalensis.**—Fruticose, scabrid, cano-pilose: leaves muricate-scabrous above, hairy beneath, tripli-nerved, mucronately denticulate, ovate-lanceolate, 4-6 inches long, spatulately narrowed to dilated connate base: peduncles cano-lanate, 3-5, subumbellate at apex of branches, exceeded by subtending leaves; heads hemispherical, 5 lines high; exterior bracts of biserial involucre 5, herbaceous, a third longer than the 8 inferior: rays 8, bidentate, 6 lines long:

disk-corollas a little exceeding involucre, equaling produced rigid tips of lacerate chaff, limb exceeding tube, lobes cano-hirsute: ray-akenes obovate; pappus-teeth confluent with wings, incurved-lanceolate, shortly-awned, connate, the lateral equaling corolla-tube: disk-akenes oblong-turbinate, subtriquetrous, costate, puncteolate; pappus a squamellate cup, exaristate or occasionally 1-awned.—Coban, alt. 4,300 feet, February, 1886. (Ex Pl. cit. 853.)

**Encelia pleistocephala.**—Branches angulate, purplish, pubescent toward inflorescence: leaves alternate, scabrid above, pubescent beneath, penninerved, callose-denticulate, oblong-lanceolate, 5-6 inches long, acuminate narrowing to a channeled petiole an inch long: corymbs compound, dense, a little surpassing leaves; heads long-pedicellate, 6 lines high; involucre half as long, campanulate, purplish-green, pubescent, 2-3-serial, inner bracts oblong, outer smaller and thick: rays 5-6, oval, 2 lines long, 3-denticulate, yellow, tube equaling involucre; disk-corollas equaling rays, exceeding concave pubescent chaff, lobes darker yellow: anthers black, barely exerted: akenes spatulate, nerved, nearly smooth, margins ciliolate; awns from inner side of conspicuous teeth, upwardly barbellate, equaling corolla: abortive akenes occasionally triquetrous, unequally 2-3-aristate.—The anomalous inflorescence recalls several *Verbesinæ*; but technically distinct by neutral rays.—Rocks near Coban, alt. 4,300 feet, February, 1887. (Ex Pl. cit. 1121.)

**Gonolobus velutinus** Schlecht., var. **calycinus.**—Indument pilose, uniform throughout of young leaves and follicles dense: leaves caudate-acuminate, hairs of upper surface from muriculate points: calyx-lobes nearly equaling corolla, roundish with caudiculate barbate apex, otherwise nearly smooth.—In 2458 *Bourgeau*, cited by Hemsl., *Biol. Centr. Am.*, leaves are as in description velutinous, calyx-lobes smaller and not produced.—Pansamalá forest, alt. 4,000 feet, April, 1887. (Ex Pl. cit. 1124.)

**Lamourouxia integerrima** (§ *Hemispadon* Benth.).—Leaves entire, lanceolate, 16-20 lines long, a fourth as broad: flowers somewhat crowded toward summit of branches: calyx faintly 8-nerved; tube 2 lines long, equaling peduncle, exceeding triangular erect bilabiate unequal teeth: corolla ventricose, 15-17 lines long, 4-5 lines wide at throat, cleft less than half way; posterior lip retuse, rectangular: anantherous stamens half as long as the fertile.—The nearly related *L. lanceolata* Benth., also collected by Mr. von Türck-

heim, similar in habit, differs by slender serrate leaves, more scattered longer-peduncled flowers, 12-costate calyx with long-spreading nearly equal marginate lobes, straight narrow more deeply cleft corolla, its posterior lip entire with produced angles, longer sterile stamens.—Pansamalá, alt. 4,000 feet, January, 1887. (Ex Pl. cit. 1112.)

**Pitcairnia Tuereckheimii** (§ *Eupitcairnia* Baker).—Acaulescent: basal bracts lanceolate, attenuately prolonged, retrorsely prickly, 12-18 lines long, passing into similar unarmed basal leaves; those of peduncle cano-floccose beneath, linear-attenuate, erect, the lower 6-8 inches long by 4-5 lines broad: peduncle a foot or more long, like triangular rhachis araneose; raceme 8-14-flowered, internodes of about an inch; bracts ovate-lanceolate to ovate, 7-4 lines long, equaling smooth erecto-patent pedicels: sepals like bracts uncolored, glabrous, linear-tapering, acute, 12-14 lines long, scarcely  $1\frac{1}{2}$  lines broad: petals nearly 3 inches long, crimson, paler below, basal scales absent: anthers protruding: style exceeding petals.—Rock-crevices, Santa Rosa, Dept. Baja Verapaz, alt. 5,000 feet, July, 1887. (Ex Pl. cit. 1298.)

**Nephrodium Tuereckheimii.** BOT. GAZETTE, xii, 133.—Explanation of Plate XI: Fig. 1. Frond reduced. Fig. 2. Portion of base of frond: nat. size. Fig. 3. Rootstock: nat. size. Fig. 4. Base of a lower pinna: nat. size. Fig. 5. Two segments of a pinna: enlarged. Fig. 6. Portion of a segment: more enlarged. Fig. 7. Indusium: magnified. Fig. 8. Scale from stipe: magnified.

An apparently undescribed species from Costa Rica is here added. It is numbered 176 of a small collection made by Señ. Juan J. Cooper, near Cartago, alt. 4,500 feet, December, 1887.

**Zanthoxylum Costaricense.**—Branches flexuose, armed with compressed recurved spines, glabrous, blotched with black exudations: petioles canaliculate, 6-9 lines long; leaflets 3, terminal exceeding others, oblong (21-26 lines), apex acuminate and retuse, base acute, crenulate, punctate throughout: panicles axillary and terminal, scaly-bracteoid, verrucose; in fruit ramified, an inch or more long, from leafless nodes: flowers not seen: cocules 1-2, globose, glandular-tuberculate, dehiscing to base, stipe and gynophore each about half a line long: seed globose.—A shrub 10-15 feet high, known as “Limoncillo.”

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